

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/SE 2003/000413	International filing date (day/month/year) 11.03.2003	Priority date (day/month/year) 12.03.2002
International Patent Classification (IPC) or national classification and IPC A61K 7/42, A61K 33/06, A61P 17/00, A61P 17/16		
Applicant Ove Karlsson konsult et al		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
 - a. ☒ (sent to the applicant and to the International Bureau) a total of 1 sheets, as follows:
 - ☒ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
 - ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
 - b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

- | | | |
|-------------------------------------|--------------|---|
| <input checked="" type="checkbox"/> | Box No. I | Basis of the report |
| <input type="checkbox"/> | Box No. II | Priority |
| <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input type="checkbox"/> | Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> | Box No. VI | Certain documents cited |
| <input type="checkbox"/> | Box No. VII | Certain defects in the international application |
| <input type="checkbox"/> | Box No. VIII | Certain observations on the international application |

Date of submission of the demand 26.09.2004	Date of completion of this report 07.10.2004
Name and mailing address of the IPEA/SE Patent- och registreringsverket Box 5055 S-102 42 STOCKHOLM Facsimile No. +46 8 667 72 88	Authorized officer Eva Johansson/EÖ Telephone No. +46 8 782 25 00

Form PCT/IPEA/409 (cover sheet) (January 2004)

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Express Mail No. EV195875296US

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/SE 2003/000413

Box No. 1 Basis of the report

- 1 With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This report is based on a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of:

- ☐ international search (under Rules 12.3 and 23.1(b))
☐ publication of the international application (under Rule 12.4)
☐ international preliminary examination (under Rules 55.2 and/or 55.3)

- 2 With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

☐ the international application as originally filed/furnished

☒ the description:

pages 1-14 as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

☐ the claims:

pages _____ as originally filed/furnished

pages* _____ as amended (together with any statement) under Article 19

pages* 1 received by this Authority on 26.09.2004

pages* _____ received by this Authority on _____

☒ the drawings:

pages 1-7 as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

☐ a sequence listing and/or any related table(s) — see Supplemental Box Relating to Sequence Listing.

- 3 ☐ The amendments have resulted in the cancellation of:

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing (specify): _____

☐ any table(s) related to the sequence listing (specify): _____

- 4 ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing (specify): _____

☐ any table(s) related to the sequence listing (specify): _____

* Item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1 Statement

Novelty (N)	Claims	<u>1-10</u>	YES
	Claims		NO
Inventive step (IS)	Claims	<u>1-10</u>	YES
	Claims		NO
Industrial applicability (IA)	Claims	<u>1-10</u>	YES
	Claims		NO

2 Citations and explanations (Rule 70.7)

The following documents are cited in the International Search Report:

D(1) PATENT ABSTRACTS OF JAPAN
vol. 199, no. 707
31 July 1997 (1997-07-31)
& JP 09 059129 A (CATALYSTS & amp;
CHEM IND CO LTD),
04 March 1997 (1997-03-04)
abstract

D(2) DATABASE WPI
Week 199549
Derwent Publication Ltd., London, GB;
Class D21, AN 1995-379946
& JP 07 258031 A (TOPY KOGYO KK),
09 October 1995 (1995-10-09)
abstract

D(3) DATABASE WPI
Week 199840
Derwent Publication Ltd., London, GB;
Class D21, AN 1998-462752
& JP 10 194944 A (POLA CHEM IND INC),
28 July 1998 (1998-07-28)
abstract

D(4) DATABASE WPI
Week 199940
Derwent Publication Ltd., London, GB;
Class D21, AN 1999-473983
& JP 11 199441 A (NOEVIR KK),
27 July 1999 (1999-07-27)
abstract

.../...

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

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Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: Box V

D5) DATABASE WPI

Week 199335

Derwent Publication Ltd., London, GB;

Class D21, AN 1993-278179

& JP 05 194174 A (DAITO KASEI KOGYO KK)

03 August 1993 (1993-08-03)

abstract

D6) DATABASE WPI

Week 199309

Derwent Publication Ltd., London, GB;

Class D21, AN 1993-071009

& JP 05 017329 A (TAYCA CORP),

26 January 1993 (1993-01-26)

abstract

D7) DATABASE WPI

Week 199502

Derwent Publication Ltd., London, GB;

Class D21, AN 1995-012461

& KR 9400999 B1 (PACIFIC IND CO),

08 February 1994 (1994-02-08)

abstract

D8) EP 0998901 A1 (SHISEIDO COMPANY LIMITED),

10 May 2000 (10.05.00)

D9) EP 0414049 A1 (MERCK PATENT GESELLSCHAFT

MIT BESCHRÄNKTER HAFTUNG), 27 February 1991 (27.02.91)

D10) US 5968531 A (MIYOSHI ET AL),

19 October 1999 (19.10.99), column 2, line 65 - column 3,
line 34, the claims

D11) US 6132745 A (MARCHI-LEMMANN ET AL),

17 October 2000 (17.10.00)

D12) EP 0558881 A2 (TAYCA CORPORATION), 8 Sept 1993

(08.09.93)

D13) wo 9801107 A1 (INDÚSTRIA E COMERCIO DE COSMETICOS NATURA
LTDA.), 15 January 1998 (15.01.98), page 9, line 5 - line 6,
claims 1-5 (a)

.../...

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

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Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: Box V

Cosmetics, Science and Technology,
Volume 1, 1972, Second Edition,
M.S. Balsam et al
sid. 254 - 256, 264, 265

New amended and restricted claims 1-10 have been filed 2004-09-26.

D1-015 relate to compositions for the prevention of skin damage caused by exposure of ultraviolet radiation. The compositions comprise a mica core coated with at least one metal oxide layer(s).

The claimed invention differ from the cited prior art in that the composition comprises from 64,5 % by weight of oil, from 2% by weight of pigment and that the thickness of the metal oxide layer is 40-80 nm. There are no indication in the prior art that would lead a person skilled in the art to the claimed composition.

The cited documents represent the general state of the art. The invention defined in claims 1-10 is not disclosed by any of these documents.

Therefore, the claimed invention is not obvious to a person skilled in the art.

Accordingly, the invention defined in claims 1-10 is novel and is considered to involve an inventive step. The invention is industrially applicable.

The Swedish Patent Office
PCT International Application

PCT/SE2003/000413
26-09-2004

1 (1)

CLAIMS

1. Composition including a pigment assembly comprising a mica core, coated with at least one metal oxide layer(s), chosen from the group consisting of TiO_2 , Fe_2O_3 and/or Cr_2O_3 or a mix thereof, wherein said composition is intended to be applied on the skin on a mammal in need thereof for the prevention of skin damages caused by exposure to ultraviolet radiation, characterized by that the composition comprises from 64,5 % by weight of oil and from 2 % by weight of pigment and that the thickness of the metal oxide layer is 40-80 nm.
2. Composition according to claim 1, wherein said composition comprises a mineral oil.
3. Composition according to claims 1 or 2, wherein said composition also comprises a viscosity adjusting agent and at least one conditioning agent.
4. Composition according to any of the claims 1-3, wherein said metal oxide layer consist of Fe_2O_3 and has a thickness of 40-60 nm.
5. Composition according to any of the claims 1-4, wherein said composition comprises more than 20 % by weight of pigment.
6. Composition according to any of the claims 1-5, wherein said metal oxide layer is coated with a dye.
7. Composition according to claim 6, wherein said dye is chosen from the group consisting of iron blue and carmine.
8. Composition according to any of the claims 1-7, wherein said composition has a pearlescent appearance.
9. Composition according to any one of the claims 1-8, wherein the concentration of pigment assemblies in the composition is direct proportional to the ability of the composition to protect against ultraviolet radiation.
10. A method to determine the suitable thickness of the composition according to claims 7 and 8 that is to be used to provide desired skin protection against ultraviolet radiation, comprising:
 - a) that the composition is applied onto the skin;
 - b) that the composition is spread out to a certain thickness on the skin; and
 - c) that one visually establishes the thickness that has been applied on the skin and the sun protection that then has been obtained by observing the visible color change on the skin, caused by the pigment assemblies in said composition.

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AMENDED SHEET